

INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

Complete if Known

Application Number 10/028,331

Filing Date December 28, 2001

First Named Inventor G. DANILOFF

Group Art Unit 1641

Examiner Name

Sheet

1

of

1

Attorney Docket Number 2232-163

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
		Number	Kind Code (if known)		
GC		6,040,194		Chick et al.	03/21/2000

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.	Foreign Patent Document			Name of Patentee of Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	T <sup>6</sup>
		Office Code	Number	Kind (if known)			

Examiner  
Signature

*Dany Count*

Date  
Considered

5/14/04

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Unique citation designation number. <sup>2</sup>See attached Kinds of U.S. Patent Documents. <sup>3</sup>Enter Office that Issued the document, by the two-letter code. <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible.

<sup>6</sup>Applicant is to place a check mark here if English language translation is attached. AB indicates that only an English language abstract is attached.



<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				<i>Complete if Known</i>	
				Application Number	10/028,331
				Filing Date	December 28, 2001
				First Named Inventor	G. DANILOFF
				Group Art Unit	1641
Examiner Name					
Sheet	1	of	2	Attorney Docket Number	2232-163

RECEIVED

JUN 05 2003

TECH CENTER 1600/2900

## U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
		Number	Kind Code (if known)		
G		6,011,984		Van Antwerp et al.	01/04/2000

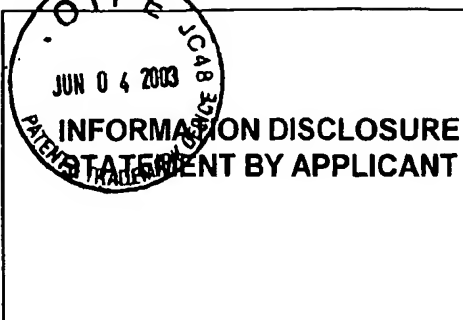
## FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.	Foreign Patent Document			Name of Patentee of Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	T <sup>6</sup>
		Office Code	Number	Kind (if known)			
G		WO	99/46600	A1	Sensors for Medicine and Science, Inc.	09/16/1999	

Examiner Signature		Date Considered	5/14/04
-----------------------	--	--------------------	---------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Unique citation designation number. <sup>2</sup>See attached Kinds of U.S. Patent Documents. <sup>3</sup>Enter Office that issued the document, by the two-letter code. <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language translation is attached. AB indicates that only an English language abstract is attached.



Sheet	2	of	2	Attorney Docket Number	<b>2232-163</b>
-------	---	----	---	------------------------	-----------------

## OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

[illegible]

**RECEIVED**

JUN 05 2003

TECH CENTER 1600/2900

**Examiner  
Signature**

Many Counts


Date  
Considered

5/14/04

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Unique citation designation number. <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.

2232-163-2nd.1449


**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

				Complete if Known	
				Application Number	10/028,331
				Filing Date	December 28, 2001
				First Named Inventor	G. DANILOFF
				Group Art Unit	1641
				Examiner Name	
Sheet	1	of	5	Attorney Docket Number	2232-163


RECEIVED  
AUG 01 2002  
TECH CENTER 1600/2900

### U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
		Number	Kind Code (if known)		
GL		5,517,313		Colvin, Jr.	05/14/1996
GL		5,894,351		Colvin, Jr.	04/13/1999
GL		5,910,661		Colvin, Jr.	06/08/1999
GL		5,917,605		Colvin, Jr.	06/29/1999
GL		5,503,770		James et al.	04/02/1996
GL		5,763,238		James et al.	06/09/1998
GL		4,329,461		Khanna et al.	05/11/1982
GL		5,833,603		Kovacs et al.	11/10/1998
GL		5,512,246		Russell et al.	04/30/1996
GL		6,011,984		Van Antwerp et al.	01/04/2000
GL		6,002,954		Van Antwerp et al.	12/14/1999

### FOREIGN PATENT DOCUMENTS

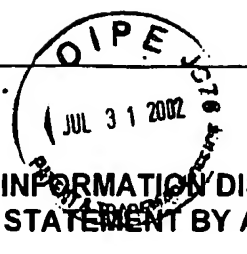
Examiner Initials*	Cite No.	Foreign Patent Document			Name of Patentee of Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	T <sup>6</sup>
		Office Code	Number	Kind (if known)			
GL		WO	99/46600	A1	Sensors for Medicine and Science, Inc.	09/16/1999	

Examiner Signature: 	Date Considered: 5/11/04
---	--------------------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Unique citation designation number. <sup>2</sup>See attached Kinds of U.S. Patent Documents. <sup>3</sup>Enter Office that issued the document, by the two-letter code.

<sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language translation is attached. AB indicates that only an English language abstract is attached.

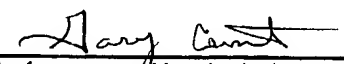
<div style="text-align: center;">  <p><b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b></p> </div>				Complete if Known	
				Application Number	10/028,331
				Filing Date	December 28, 2001
				First Named Inventor	G. DANILOFF
				Group Art Unit	1641
Examiner Name					
Sheet	2	of	5	Attorney Docket Number	2232-163

**RECEIVED**

AUG 01 2002

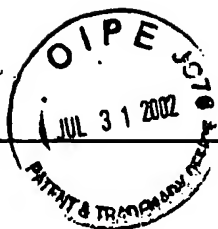
TECH CENTER 1600/2900

**OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T <sup>6</sup>
Ge		APPLETON, B. et al., "Detection of Total Sugar Concentration Using Photoinduced Electron Transfer Materials: Development of Operationally Stable, Reusable Optical Errors", <i>Sensors and Actuators</i> , B 65, 2000, pp. 302-304	
Ge		BARKER, S. et al., "The Interaction of Areneboronic Acids with Monosaccharides", <i>Carbohydrate Research</i> , 1973, Vol. 26, pp. 33-40	
Ge		BURNETT, T. et al., "Synthesis of A Fluorescent Boronic Acid Which Reversibly Binds to Cell Walls and A Diboronic Acid Which Agglutinates Erythrocytes", <i>Biochem. and Biophys. Res. Comm.</i> , 96:1 (1980), pp. 157-162	
Ge		CATLIN, J., "Synthesis, Reactions, and Mass Spectral Studies of Some Cyclic Amine-Boranes and Their Catechol Derivatives", <i>J. Org. Chem.</i> , 1969, Vol. 34, No. 6, pp. 1664-1668	
Ge		COOPER, C. et al., "Selective D-glucosamine Hydrochloride Fluorescence Signalling Based on Ammonium Cation and Diol Recognition", <i>Chem. Commun.</i> , 1997, pp. 1419-1420	
Ge		CZARNIK, A., "Chemical Communication in Water Using Fluorescent Chemosensors", <i>Acc. Chem. Res.</i> , 1994, Vol. 27, pp. 302-308	
Ge		DAVIS, C. et al., "Simple and Rapid Visual Sensing of Saccharides", <i>Org. Lett.</i> , 1:2, 1999, pp. 331-334	
Ge		DEETZ, M. et al., "Heteroditopic Ruthenium (II) Bipyridyl Receptor with Adjacent Saccharide and Phosphate Binding Sites", <i>Tetrahedron Letters</i> , 1998, Vol. 39, pp.6841-44	
Ge		EGGERT, H. et al., "A New Glucose-Selective Fluorescent Bisboronic Acid. First Report of Strong $\alpha$ -Furanose Complexation in Aqueous Solution at Physiological pH", <i>J. Org. Chem.</i> , 1999, Vol. 64, pp. 3846-52	
Ge		FRIEDMAN, S. et al., "Complexation of Phenylboronic Acid with Lactic Acid. Stability Constant and Reaction Kinetics", <i>Jour. of the Amer. Chemical Soc.</i> , 1974, 96:17, pp. 5381-5384	
Ge		GLASS, T., "Cooperative Chemical Sensing with Bis-tritylacetylenes: Pinwheel Receptors with metal Ion Recognition Properties", <i>J. Am. Chem. Soc.</i> , 2000, Vol. 122, pp. 4522-4523	
Ge		ISHI-I, T., et al., "Structure Determination of a 1:2 Threitol-Boronic Acid Complex: Comments on the Structural Controversy between 5,5- and 6,6-Membered Rings", <i>Tetrahedron</i> , 1998, Vol. 54, pp. 8679-86	
Ge		ISHI-I, T., et al., "D/L Selective Re-binding of Saccharide-Imprinted [60]Fullerene-Bisadducts Based on a Saccharide-Boronic Acid Interaction: Development of a Molecular Imprinting Technique Useful in a Homogeneous System", <i>Tetrahedron</i> , 1999, Vol. 55, pp. 3883-92	
Ge		JAMES, T., et al., "Fluorescent Saccharide Receptors: A Sweet Solution to the Design, Assembly and Evaluation of Boronic Acid Derived PET Sensors", <i>Chem. Comm.</i> , 1996, pp. 1-21	
Examiner Signature			Date Considered
			5/14/04

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Unique citation designation number. <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.



# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Complete if Known

Application Number 10/028,331

Filing Date December 28, 2001

First Named Inventor G. DANILOFF

Group Art Unit 1641

Examiner Name

RECEIVED  
AUG 01 2002  
TECH CENTER 1600/2900

Sheet

3

of

5

Attorney Docket Number

2232-163

## OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T <sup>6</sup>
GC		JAMES, T., et al., "A Glucose-Selective Molecular Fluorescence Sensor", <i>Angew Chem. Int. Ed. Engl.</i> , 1994, Vol. 33, pp. 2207-09	
GC		JAMES, T., et al., "Novel Photo induced Electron-Transfer Sensor Saccharides Based on the Interaction of Boronic Acid and Amine", <i>J. Chem. Soc., Chem. Commun.</i> , 1994, pp. 477-78	
GC		JAMES, T., et al., "Novel Saccharide-Photoinduced Electron Transfer Sensors Based on the Interaction of Boronic Acid and Amine", <i>J. Am. Chem. Soc.</i> , 1995, Vol. 117, No. 35, pp. 8982-87	
GC		JAMES, T., et al., "Saccharide Sensing with Molecular Receptors Based on Boronic Acid", <i>Angew Chem. Int. Ed. Engl.</i> , 1996, Vol. 35, pp. 1911-22	
GC		JAMES, T. et al., "Chiral Discrimination of Monosaccharides Using a Fluorescent Molecular Sensor", <i>Letters to Nature, Nature</i> , 1995, Vol. 374, pp. 345-347	
GC		KATAOKA, K., et al., "Novel Sensing System for Glucose Based on the Complex Formation Between Phenylborate and Fluorescent Diol Compounds", <i>J. Biochem.</i> , 1995, Vol. 117, pp. 1145-1147	
GC		LAVIGNE, J., et al., "Teaching Old Indicators New Tricks: A Colorimetric Chemosensing Ensemble for Tartrate/Malate in Beverages", <i>Angew. Chem. Int. Ed.</i> , 1999, Vol. 38, No. 24, pp. 3666-3669	
GC		LI, J. et al., "A Highly Sensitive and Selective Catalytic DNA Biosensor for Lead Ions", <i>J. Am. Chem. Soc.</i> , 2000, Vol. 122, pp. 10466-10467	
GC		LINNANE, P. et al., "A Sweet Toothed Saccharide (PET) Sensor", <i>Tetrahedron Letters</i> , 1995, Vol. 36, No. 48, pp. 8833-8834	
GC		MIZUNO, T. et al., "Re-Investigation of Optical Sensing Properties of Boronic-Acid-Appended Re Complexes for Saccharides", <i>J. Chem. Soc. Perkin Trans.</i> , 2000, Vol. 1, pp. 407-13	
GC		MIZUNO, T. et al., "Sugar Sensing Using Chiral Salen-Co(II) Complexes", <i>Tetrahedron</i> , 1999, Vol. 55, pp. 9455-68	
GC		MURAKAMI, H. et al., "Sugar Sensing Utilizing Aggregation Properties of Boronic-Acid -Appended Porphyrins and Metalloporphyrins", <i>J. Chem. Soc. Perkin Trans. 2</i> , 1994, pp. 975-981	
GC		NAKASHIMA, K., et al., "Diaza-18-Crown-6-Based Saccharide Receptor Bearing Two Boronic Acids. Possible Communication Between Bound Saccharides and Metal Cations", <i>Ind. Eng. Chem. Res.</i> , 2000, Vol. 39, pp. 3479-83	
GC		NORRILD, J., et al., "Evidence for Mono- and Bidentate Boronate Complexes of Glucose in the Furanose Form. Application of J <sub>CC</sub> Coupling Constants as a Structural Probe", <i>J. Am. Chem. Soc.</i> , 1995, Vol. 117, pp. 1479-84	

Examiner  
Signature

*[Signature]*

Date  
Considered

5/19/04

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Unique citation designation number. <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.



# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Complete if Known

Application Number	10/028,331
Filing Date	December 28, 2001
First Named Inventor	G. DANILOFF
Group Art Unit	1641
Examiner Name	

RECEIVED

AUG 01 2002

TECH CENTER 1600/2900

Sheet 4 of 5 Attorney Docket Number 2232-163

## OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T <sup>6</sup>
GC		OJADI, E., et al., "Properties of Porphyrin Dimers, Formed by Pairing Cationic and Anionic Porphyrins", <i>J. Am. Chem. Soc.</i> , 1985, Vol. 107, pp. 7783-7784	
GC		PIZER, R. et al., "Mechanism of the Complexation of Boron Acids with Catechol and Substituted Catechols", <i>Inorganic Chemistry</i> , 1977, Vol. 16, No. 7, pp. 1677-1681	
GC		ROLINSKI, O. et al., "A Fluorescence Lifetime Sensor for Cu(I) Ions", <i>Meas. Sci. Technol.</i> , 1999, Vol. 10, pp. 127-136	
GC		SAMANKUMARA SANDANAYAKE, K. et al., "Molecular Fluorescence Sensor for Saccharides Based on Amino Coumarin", <i>Chemistry Letters</i> , 1995, pp. 139-140	
GC		SAMANKUMARA SANDANAYAKE, K. et al., "Two Dimensional Photoinduced Electron Transfer (PET) Fluorescence Sensor for Saccharides", <i>Chemistry Letters</i> , 1995, pp. 503-504	
GC		SHIINO, D. et al., "Amine Effect on Phenylboronic Acid Complex with Glucose Under Physiological pH in Aqueous Solution", <i>J. Biomater. Sci. Polymer Edn</i> , 1996, Vol. 7, No. 8, pp. 697-705	
GC		SHINKAI, S. et al., "Molecular Design of Artificial Sugar Sensing Systems", <i>Trends in Analytical Chemistry</i> , 1996, Vol. 15, No. 5, pp. 418-424	
GC		SHINKAI, S., "Aqueous Sugar Sensing by Boronic-Acid-Based Artificial Receptors", <i>Chemosensors of Ion and Molecule Recognition</i> , 1997, pp. 37-59	
GC		SHINMORI, H. et al., "Spectroscopic Sugar Sensing By A Stilbene Derivative with Push (Me <sub>2</sub> N)-Pull ((HO) <sub>2</sub> B)- Type Substituents", <i>Tetrahedron</i> , 1995, Vol. 51, No. 7, pp. 1893-1902	
GC		SHINMORI, H., et al., "A Novel Light-Gated Sugar Receptor, Which Shows High Glucose Selectivity", <i>J. Chem. Soc., Perkin Trans.</i> , 1998, Vol. 2, pp. 847-52	
GC		SHIOMI, Y., et al., "Specific Complexation of Glucose with a Diphenylmethane-3,3'-Dioboronic Acid Derivative: Correlation Between the Absolute Configuration of Mono- and Di-Saccharides and the Circular Dichroic Activity of the Complex", <i>J. Chem. Soc. Perkin Trans.</i> , 1993, Vol. 1, pp. 2111-17	
GC		SUN, W. et al., "Synthesis of Fluorinated Fluoresceins", <i>J. Org. Chem.</i> , 1997, Vol. 62, pp. 6469-6475	
GC		SUN, W. et al., "Synthesis of Novel Fluorinated Coumarins: Excellent UV-Light Excitable Fluorescent Dyes", <i>Bioorganic &amp; Medicinal Chemistry Letters</i> 8, 1998, pp. 3107-3110	
GC		TAKEUCHI, M., et al., "Fluorescence and CD Spectroscopic Sugar Sensing by a Cyanine-Appended Diboronic Acid Probe", <i>Tetrahedron</i> , 1996, Vol. 52, No. 4, pp. 1195-1204	

Examiner Signature

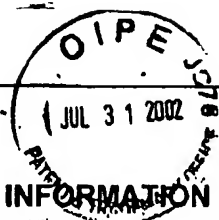
*Harry Cant*

Date Considered

5/14/04

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Unique citation designation number. <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.



INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Complete if Known	
				Application Number	10/028,331
				Filing Date	December 28, 2001
				First Named Inventor	G. DANILOFF
				Group Art Unit	1641
Examiner Name					
Sheet	5	of	5	Attorney Docket Number	2232-163

RECEIVED

AUG 01 2002

TECH CENTER 1600/2900

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T <sup>6</sup>
GC		TAKEUCHI, M., et al., "Molecular Design of Highly Selective and Sensitive "Sugars Tweezers" from Boronic Acid-Appended $\mu$ -Oxo-bis[porphinatoiron (III)]s, 1998, <i>Bull. Chem. Soc. Jpn.</i> , 1998, Vol. 71, pp. 1117-23	
GC		TAKEUCHI, M. et al., "Fluorescent Sensing of Uronic Acids Based on a Cooperative Action of Boronic Acid and Metal Chelate", <i>Chem. Commun.</i> , 1997, pp. 1731-1732	
GC		TRAN-THI, T. et al., "Subpicosecond Excitation of Strongly Coupled Porphyrin-Phthalocyanine Mixed Dimers", <i>J. Chem. Soc. Faraday Trans.</i> , 1992, Vol. 88, pp. 2129-2137	
GC		TSUKAGOSHI, K., et al., "Specific Complexation with Mono- and Disaccharides that can be Detected by Circular Dichroism", <i>J. Org. Chem.</i> , 1991, Vol. 56, pp. 4089-91	
GC		TYAGI, S. et al., "Multicolor Molecular Beacons for Allele Discrimination", <i>Nature Biotechnology</i> , 1998, Vol. 16, pp. 49-53	
GC		UGGLA, R., et al., "Diphenylmethane 3,3'-Diboronic Acid as a Model of Molecular Sensors for Sugars. Recognition of Glucose in a Furanose or Pyranose Form?", <i>Acta Chemica Scandinavica</i> , 1999, Vol. 53, pp. 34-40	
GC		VOSS, W. et al., "Detection of Protease Activity Using A Fluorescence-Enhancement Globular Substrate", <i>Research Reports from Biotechniques</i> , 1996, Vol. 20, pp. 286-291	
GC		WISKUR, S. et al., "pK <sub>a</sub> Values and Geometries of Secondary and Tertiary Amines Complexed to Boronic Acids - Implications for Sensor Design", <i>Org. Lett.</i> , 0:0, A-D, April 6, 2001	
GC		YAM, V., et al., "Synthesis and Optical Sensing Properties of a Boronic Acid Appended Rhenium(I) Complex for Sugar", <i>Chem. Commun.</i> , 1998, pp. 109-110	
GC		YOON, J., et al., "Fluorescent Chemosensing of Catechol and Catecholamines in Water", <i>Bioorganic &amp; Medicinal Chemistry</i> , 1993, Vol. 1, No. 4, pp. 267-71	
GC		YOON, J., et al., "Fluorescent Chemosensors of Carbohydrates. A Means of Chemically Communicating the Binding of Polyols in Water Based on Chelation-Enhanced Quenching", <i>J. Am. Chem. Soc.</i> , 1992, Vol. 114, pp. 5874-75	

Examiner Signature	<i>Long Cant</i>	Date Considered	5/14/04
--------------------	------------------	-----------------	---------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Unique citation designation number. <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.